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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/090,379

03/04/2002

Joe Page

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02/05/2007

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EXAMINER

DOAN, PHUOC HUU

ART UNIT

PAPER NUMBER

2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/090,379	Applicant(s) PAGE ET AL.	
	Examiner PHUOC H. DOAN	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28 is/are allowed.
- 6) ☒ Claim(s) 1-4, 10-14 and 19-22 is/are rejected.
- 7) ☒ Claim(s) 5-8, 10, 15-18 and 23-27 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/04/02</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 11-14, 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson (US Patent No. 6,611,236).

As to claim 1, Nilsson discloses a mobile aerial communications antenna assembly (FIG. 1, col. 2, lines 56-67), comprising: a mobile aerial assembly (col. 3, lines 1-65); a transportation system operably connected to the mobile aerial assembly, wherein the transportation system comprises a lift source operable for generating a lift force (col. 2 through col. 3, lines 61-65), providing the mobile aerial assembly with maneuverability in three dimensions (col. 3, lines 1-26). However, Nilsson does not specific disclose that a communications system operably connected to the mobile aerial assembly, wherein the communications system comprises a communications device operable for transmitting and receiving a plurality of mobile communications signals; and a control system in communication with the transportation system, the control system operable for controlling the operation of the transportation system.

Miyake et al. disclose that a communications system operably connected to the mobile aerial assembly, wherein the communications system comprises a communications device operable for transmitting and receiving a plurality of mobile communications signals (FIG. 13, col. 10 through col. 11, lines 31-67); and a control system in communication with the transportation system (FIG. 3, col. 5 through col. 6, lines 60-67), the control system operable for controlling the operation of the transportation system (FIG. 18, col. 11 through col. 12, lines 36-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a plurality of mobile communications signals and control system of Miyake et al. to the system of Nilsson in order to perform per to per communication, and a very convenient communication system can be achieved in case of emergency.

As to claim 2, the combination of Nilsson and Miyake et al. disclose the mobile aerial communications antenna assembly of claim 1, wherein the lift source is operable for generating a plurality of directional forces (col. 3, lines 1-25 of Nilsson).

As to claim 3, the combination of Nilsson and Miyake et al. disclose the mobile aerial communications antenna assembly of claim 1, wherein the control system is in communication with the communications system (col. 4, lines 31-67

of Miyake et al.), the control system operable for controlling the operation of the communications system (col. 6, lines 10-67 of Miyake et al.).

As to claim 4, the combination of Nilsson and Miyake et al. disclose the mobile aerial communications antenna assembly of claim 1, wherein the mobile aerial assembly comprises a support structure (col. 5 through col. 6, lines 18-21 of Nilsson).

As to claim 11, the combination of Nilsson and Miyake et al. disclose the mobile aerial communications antenna assembly of claim 1, wherein the communications device is operable for transmitting and receiving a plurality of mobile communications signals to and from a plurality of mobile communications devices (FIG. 9, col. 6, lines 1-67 of Miyake et al.).

As to claim 12, the combination of Nilsson and Miyake et al. disclose the mobile aerial communications antenna assembly of claim 1, wherein the communications device comprises a cellular antenna (FIG. 3, item 22, col. 6, lines 10-20 of Miyake et al.).

As to claim 13, the combination of Nilsson and Miyake et al. disclose the mobile aerial communications antenna assembly of claim 1, wherein the communications device is operable for transmitting and receiving a plurality of

mobile communications signals to and from a plurality of cellular antennas (col. 10, lines 14-64 of Miyake et al.).

As to claim 14, the combination of Nilsson and Miyake et al. disclose the mobile aerial communications antenna assembly of claim 1, wherein the control system is operably connected to the mobile aerial assembly (FIG. 1, item 16, col. 4, lines 30-60 of Miyake et al.).

As to claim 19, Nilsson discloses a method for using a mobile aerial communications antenna assembly (FIG. 1, col. 2, lines 56-67), the method comprising: providing a mobile aerial assembly (col. 3, lines 1-65); providing a transportation system operably connected to the mobile aerial assembly (col. 3, lines 1-65), wherein the transportation system comprises a lift source operable for generating a lift force and a plurality of directional forces (col. 2 through col. 3, lines 61-65, and col. 4, lines 45-67), providing the mobile aerial assembly with maneuverability in three dimensions (col. 3, lines 1-26). However, Nilsson does not specific disclose that providing a communications system operably connected to the mobile aerial assembly, wherein the communications system comprises a communications device operable for transmitting and receiving a plurality of mobile communications signals; providing a control system in communication with the transportation system and the communications system, the control system

operable for controlling the operation of the transportation system and the communications system; and maneuvering the mobile aerial assembly into an area of mobile communications service demand.

Miyake et al. disclose wherein the communications system comprises a communications device operable for transmitting and receiving a plurality of mobile communications signals (FIG. 13, col. 10 through col. 11, lines 31-67); providing a control system in communication with the transportation system and the communications system (FIG. 3, col. 5 through col. 6, lines 60-67, and col. 11, lines 1-67), the control system operable for controlling the operation of the transportation system and the communications system (FIG. 18, col. 11 through col. 12, lines 36-67); and maneuvering the mobile aerial assembly into an area of mobile communications service demand (FIG. 1, col. 4 through col. 5, lines 30-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a plurality of mobile communications signals and control system of Miyake et al. to the system of Nilsson in order to perform per to per communication, and a very convenient communication system can be achieved in case of emergency.

As to claim 20, this claim is rejected for the same reason as set forth in claim 11.

As to claim 21, this claim is rejected for the same reason as set forth in claim 12.

As to claim 22, this claim is rejected for the same reason as set forth in claim 13.

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson in view of Miyake et al. (US Patent No. 6,678,341) as applied to claim 1 above, and further in view of Wright et al. (US Pub No. 2003/0148736).

As to claim 9, the combination of Nilsson and Miyake et al. do not disclose the mobile aerial communications antenna assembly of claim 1, wherein the lift source comprises a flight control device.

Wright et al. disclose wherein the lift source comprises a flight control device (col. 4 through col. 5, par. [0047-0052]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a flight control device of Wright et al. to the system of Nilsson and Miyake et al. in order to maintain the communication system.

Allowable Subject Matter

4. Claim 28 allowed.

The following is a statement of reasons for the indication of allowable subject matter:

As to claim 28, Nilsson and Miyake et al., alone or in combination, do not disclose a method for using a mobile aerial communications antenna assembly in a search and rescue operation, the method comprising: providing a mobile aerial assembly; providing a transportation system operably connected to the mobile aerial Assembly, wherein the transportation system comprises a lift source operable for generating a lift force and a plurality of directional forces, providing the mobile aerial assembly with maneuverability in three dimensions; providing a communications system operably connected to the mobile aerial assembly, wherein the communications system comprises a communications device operable for receiving a mobile communications signal transmitted by a mobile communications device; providing a control system in communication with the transportation system and the communications system, the control system operable for controlling the operation of the transportation system and the communications system; maneuvering the mobile aerial assembly into a search and rescue area; monitoring a signal strength of the mobile communications signal; maneuvering the mobile aerial assembly in a direction of increasing signal strength; and locating the mobile communications device.

5. Claims 5-8, 10, 15-18, and 23-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claim 5, the prior art of record do not disclose the mobile aerial communications antenna assembly of claim 1, wherein the mobile aerial assembly comprises a protective housing.

As to claim 6, the prior art of record do not disclose the mobile aerial communications antenna assembly of claim 1, wherein the lift source comprises a lift source selected from the group consisting of a propeller and a ducted fan.

As to claim 8, the prior art of record do not disclose the mobile aerial communications antenna assembly of claim 1, wherein the lift source comprises a lift source selected from the group consisting of a blimp and a balloon.

As to claim 10, the prior art of record do not disclose the mobile aerial communications antenna assembly of claim 9, wherein the flight control device comprises a flight control device selected from the group consisting of a servo mechanism, a rudder, a stabilizer, an aileron, a flap, a slat, and a defection mechanism.

As to claim 15, the prior art of record do not disclose the mobile aerial communications antenna assembly of claim 1, wherein the control system is operably connected to the transportation system via a tether.

As to claim 16, the prior art of record do not disclose the mobile aerial communications antenna assembly of claim 1, further comprising a power source operably connected to the transportation system.

As to claim 23, the prior art of record do not disclose the method for using the mobile aerial communications antenna assembly of claim 19, wherein the control system is operably connected to mobile aerial assembly via a tether.

As to claim 24, the prior art of record do not disclose the method for using the mobile aerial communications antenna assembly of claim 19, further comprising providing a power source operably connected to the transportation system and the communications system.

As to claim 27, the prior art of record do not disclose the method for using the mobile aerial communications antenna assembly of claim 19, wherein the area of mobile communications services demand comprises an area of temporaly mobile communications services demand.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUOC H DOAN whose telephone number is 703-305-6311. The examiner can normally be reached on 9:30 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LESTER G KINCAID can be reached on 703-308-7745. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

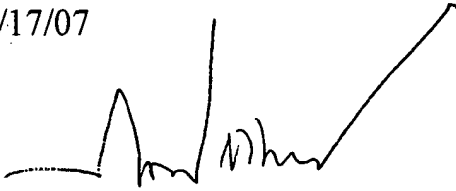
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Art Unit: 2687

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Phuoc Doan

01/17/07

A handwritten signature in black ink, appearing to be 'Phuoc Doan', with a long, sweeping diagonal stroke extending upwards and to the right.A handwritten signature in black ink, appearing to be 'W. Trost', with a long, sweeping diagonal stroke extending upwards and to the right.

WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600